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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/062,700

01/31/2002

Richard C. Lau

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TELCORDIA TECHNOLOGIES, INC.  
ONE TELCORDIA DRIVE 5G116  
PISCATAWAY, NJ 08854-4157

EXAMINER

BAYARD, DJENANE M

ART UNIT

PAPER NUMBER

2141

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11/02/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/062,700	<b>Applicant(s)</b> LAU ET AL.	
	<b>Examiner</b> Djenane M. Bayard	<b>Art Unit</b> 2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is in response to amendment filed on 1/18/07 in which claims 1-26 are pending.

#### *Response to Arguments*

2. Applicant's arguments have been fully considered but they are not persuasive. Applicant argues that Crooks fails to teach "receiving status information without using prior knowledge of port interconnections relating to nodes in the portion of the network whose unknown physical connectivity configuration is to be determined". However, Crooks clearly teaches wherein the repository of information is **gathered and identified in the course of the topology discovery process** (See col. 4, lines 50-52). Contrary to Applicant's assertion, the configuration information is the configuration information is not available beforehand but rather identified in the course of the topology discovery process.

Furthermore, Applicant argues that Crooks in view of Ohba fails to teach "receiving additional status information when the subset of nodes exceeds a threshold number of nodes". However, Ohba clearly teaches wherein the ingress node information is different, whether this node supports the label merging or not is checked (step S107), and if the label merging is not supported, the next flow table entry is checked (steps Silo, Sill). If the label merging is supported, when hmax is greater than the hop count of this entry (step S108 NO), the next flow table entry is checked (steps Silo, Sill), whereas when hmax is less than or equal to the hop count of this entry (step S108 YES), Eu is set equal to this entry and hmax is set equal to the hop count of this entry (step S109) and the next flow table entry is checked (See page 20, paragraph [0292]).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-10, 13-22, 25-26 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application No. 6,859,452 to Crooks.

a. As per claims 1, 13 and 25-26 Crooks teaches a configuration mapping in an ATM-Based wide area network. Furthermore, Crooks teaches a method to determine a physical connectivity configuration of at least a portion of a network when the physical connectivity configuration is unknown, the method comprising: receiving status information, without using prior knowledge of port interconnections, relating to nodes in the portion of the network whose unknown physical connectivity configuration is to be determined (See col.4, lines 40-67 and col. 5, lines 1-10, *the template presented is the repository of information that is gathered and identified in the course of the topology discovery process*); determining, for the nodes, respective labels that indicate one or more virtual connections traversing the nodes based on the status information (See col. 3, lines 33-54) identifying at least one link between a subset of the nodes based on the respective labels and determining the physical connectivity configuration of the portion of the network based on

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the at least one link (See col. 5, lines 15-32, *TDU examines each of the ATM interfaces and retrieves and stores the IP address, the subnet mask, the city, the state and the VPI/VCI for each ATM interface, thereby creating a list of physical and logical information representing the ATM interface end points*).

b. As per claims 2 and 14, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches wherein receiving status information comprises: receiving management information base parameters from the nodes (See Col. 5, lines 56-58).

c. As per claims 3 and 15, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches wherein receiving the management information base parameters comprises receiving a virtual path identifier for each of the one or more virtual connections (See col. 5, lines 16-32).

d. As per claims 4,8, 16 and 20, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches wherein receiving the management information base parameters comprises receiving virtual channel identifier information for each of the one or more virtual connections (See col. 5, lines 27-32).

e. As per claims 5 and 17, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches wherein determining respective labels that indicate one or more virtual connections traversing the nodes comprises determining one or more identifiers for each

of the one or more virtual connections (See col. 4, lines 40-55).

f. As per claims 6 and 18, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches wherein identifying at least one link between a subset of the nodes comprises determining the subset of nodes having the same one or more identifiers (See col. 3, lines 46-54).

g. As per claims 7 and 19, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches wherein determining one or more identifiers comprises determining a virtual path identifier for each of the one or more virtual connections (See col. 3, lines 46-54).

h. As per claims 9 and 21, Crooks teaches the claimed invention as described above.

Furthermore, Crooks teaches determining respective labels that indicate one or more virtual connections traversing the nodes comprises: determining a number of the virtual connections traversing the nodes; and determining respective cardinalities of the nodes based on the number of the virtual connections (See page 5, lines 15-26).

i. As per claims 10 and 22, Crooks et al teaches the claimed invention as described above.

Crooks et al fails to teach wherein determining at least one link between the subset of the nodes comprises determining the subset of nodes having the same cardinality (See page 5, lines 27-32).

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 11-12 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,859,452 to Crooks in view of U.S. patent Application No. 2002/0176370 to Ohba et al.

a. As per claims 11 and 23, Crooks teaches a configuration mapping in an ATM-Based wide area network. Furthermore, Crooks teaches a method to determine a physical connectivity configuration of at least a portion of a network when the physical connectivity configuration is unknown, the method comprising: receiving status information, without using prior knowledge of port interconnections, relating to nodes in the portion of the network whose unknown physical connectivity configuration is to be determined (See col.4, lines 40-67 and col. 5, lines 1-10, *the*

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*template presented is the repository of information that is gathered and identified in the course of the topology discovery process*); determining, for the nodes, respective labels that indicate one or more virtual connections traversing the nodes and determining respective cardinalities based on the number of the virtual connection (See col. 3, lines 33-54) identifying at least one link between a subset of the nodes based on the respective labels comprising determining the subset of nodes having the same cardinality and determining the physical connectivity configuration of the portion of the network based on the at least one link (See col. 5, lines 15-32, *TDU examines each of the ATM interfaces and retrieves and stores the IP address, the subnet mask, the city, the state and the VPI/VCI for each ATM interface, thereby creating a list of physical and logical information representing the ATM interface end points*). However, Crooks fails to teach receiving additional status information when the subset of nodes exceeds a threshold number of nodes.

Ohba et al teaches receiving additional status information when the subset of nodes exceeds a threshold number of nodes (See page 20, paragraph [0291-0292]).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the teaching of Ohba et al in the claimed invention of Crooks in order to maintain the updated ingress node information and hop count value correctly (See page 20, paragraph [0296]).

b. As per claims 12 and 24, Crooks in view of Ohba et al teaches the claimed invention as described above. However, Crooks fails to teaches wherein the threshold number of nodes is 2.

Ohba et al teaches a limit of the number of nodes (See page 20, paragraph [0291-0292]).



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It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate the teaching of Ohba et al in the claimed invention of Crooks in order to maintain the updated ingress node information and hop count value correctly (See page 20, paragraph [0296]).

### *Conclusion*

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Djenane M. Bayard whose telephone number is (571) 272-3878. The examiner can normally be reached on Monday- Friday 5:30 AM- 3:00 PM..

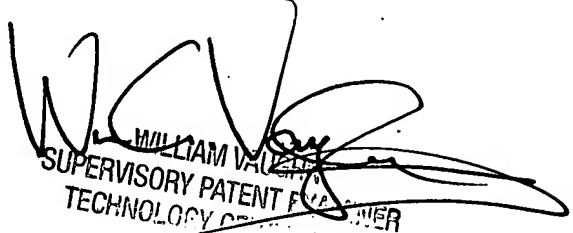
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (571) 272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Djenane Bayard

Patent Examiner

  
WILLIAM VALDEZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER